

## **REMARKS**

These Remarks are in reply to the Office Action mailed April 10, 2006. Claims 39-47 and 49-63 were pending in the Application prior to the outstanding Office Action, with claims 52-55 and 58 having been withdrawn. Claims 39-47, 49-51, 56-57 and 59-63 are being amended, and new claims 64-70 are being added. Support for the claim amendments and new claims is provided in the application as originally filed.

Based on the above amendments and the following remarks, Applicants respectfully request reconsideration and withdrawal of the outstanding objections and rejections.

### **I. Information Disclosure Statement**

Regarding informalities in the previously cited Information Disclosure Statement, Applicants are perplexed by the missing copies of items 109-110 and 125-155 because the Patent Office has acknowledged receipt of those references. In any event, Applicants have re-submitted copies of those items. Note that Applicants have kept the item numbers as before to prevent confusion. Also, as to references that the Examiner identified as improperly cited, namely 2-3, 92-93, 95-119, 144, 150-153 and 155, Applicants have included a new 1449, providing better citations whenever possible. To help the Examiner, for those that Applicants have no additional information, Applicants have included just the previous citations. Also, Applicants corrected mistakes in previous citation regarding reference number 126, and Applicants have performed a Google search to identify the publication date for reference number 144.

Further, Applicants are submitting six additional references. Again to prevent confusion, Applicants have listed the six references in a separate 1449.

### **II. Claim Rejections under 35 U.S.C. § 101**

Claims 39-47, 49-51, 56-57 and 59-63 were rejected under 35 U.S.C. § 101 for allegedly being directed to non-statutory subject matter. Applicants have amended these claims to recite that adjusting certain study materials gets the user's attention so as to

improve the user's concentration in learning a subject. It is Applicants' understanding that such recitations in a claim would not render the claim non-statutory.

### **III. Prior Art Rejections**

Claims 39-43, 45, 49-51, 56-57 and 59-63 were rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by U.S. Patent No. 4,037,332 to Petrusinsky (hereafter "Petrusinsky")

Claim 44 was rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Petrusinsky as applied to claim 40, in view of U.S. Patent No. 3,573,359 to Guisinger (hereafter "Guisinger").

Claims 46-47 were rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Petrusinsky as applied to claim 45, in view of U.S. Patent No. 5,267,865 to Lee et al. (hereafter "Lee").

### **IV. Discussion of Claims**

#### **Claim 39**

**Claim 39** is patentable over Petrusinsky for at least the reason that Petrusinsky does not teach or suggest a computer-implemented method that includes "waiting for a user input to the computer via a keyboard or position-pointing device, with the input being in response to the study materials", and "upon failure to receive a user input to the computer via a keyboard or position-pointing device within a specified time period, adjusting the study materials for presentation on the subject, to get the user's attention so as to improve the user's concentration in learning the subject".

First of all, Petrusinsky teaches attaching a sensor unit 25 to a reference student's body<sup>1</sup> to monitor the student's bioprocesses.<sup>2</sup> There is no mention of a keyboard or a position-pointing device (e.g., a mouse) in Petrusinsky, let alone "waiting for a user input to the computer via a keyboard or position-pointing device", and then performing certain actions in view of lacking such input.

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<sup>1</sup> See, for example, Petrusinsky, column 7, lines 45-47.

<sup>2</sup> See, for example, Petrusinsky, column 17, lines 26-37.

Second, there is no teaching or suggestion that Petrusinsky adjusts study materials “upon failure to receive a user input to the computer via a keyboard or position-pointing device within a specified time period”. Though Petrusinsky seems to keep track of how many student bioprocesses occur over a period of time, and then makes some decisions based thereon<sup>3</sup>, this is different from performing an action upon failure to receive a user input within a specified time period. Further, Petrusinsky monitors bioprocesses, not inputs via a keyboard or position-pointing device.

Petrusinsky does mention that it can monitor a student’s time of reaction to test signals<sup>4</sup>. However, Petrusinsky’s “time of reaction” measurements are not used to determine how long the system should wait for a user input before the system adjusts study materials. Rather, it appears that Petrusinsky monitors “time of reaction” so as to commutate in time (which Applicants interpret to mean reversing the direction of) specific signals<sup>5</sup>. This is quite different from what is being claimed.

For at least the above reasons, Applicants respectfully request that the 102(b) rejection of claim 39 be reconsidered and withdrawn.

#### **Claims 40-43**

**Claim 40** is patentable over Petrusinsky for at least the reason that Petrusinsky does not teach or suggest “waiting for an input by the user to the computer”, and then adjusting the study materials in view of lacking such input within a time period.

Claim 40 is also patentable over Petrusinsky because Petrusinsky does not teach or suggest determining a reference response time based on a previous learning session, and using the reference response time to specify a time period; and upon failure to receive a user input within such a time period, adjusting the study materials. Though Petrusinsky records the reference student’s bioprocesses, the recordation is for determining if the student currently produces a lesser number of responses over the last period.<sup>6</sup> This again is quite different from what is being claimed.

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<sup>3</sup> See Petrusinsky, column 18, lines 36-53.

<sup>4</sup> See Petrusinsky, column 3, 14-18; and column 17, lines 1-10.

<sup>5</sup> See Petrusinsky, column 3, lines 14-18; and column 25, lines 64-68.

<sup>6</sup> See Petrusinsky, column 18, lines 40-53.

Also as explained in the above discussion of claim 39, Petrusinsky's monitoring a student's time of reaction to test signals is used to commutate in time specific signals, which is again quite different from what is being claimed.

For at least the above reasons, Applicants respectfully request that the 102(b) rejection of claim 40 be reconsidered and withdrawn.

**Claims 41-42** depend from and add additional features to claim 40. Applicants believe that these claims are patentable for at least the reasons discussed above with regards to claim 40, as well as for the features that they add.

**Claim 43** is patentable over Petrusinsky for at least the reason that Petrusinsky does not teach or suggest "adjusting the study materials independent of the content of the input." The Office Action cited col. 15, lines 11-16 as support for Petrusinsky providing such teachings. Applicants respectfully disagree.

First of all, in that section, Petrusinsky describes an operator performing certain actions "irrespective of the subject being taught." Applicants are not claiming an operator performing certain actions. In claim 43, it is a computer implemented method that is adjusting the study materials.

Also, the input as claimed is a user input via a keyboard or position-pointing device, with the input being in response to the study materials. Petrusinsky does not teach or suggest being aware of such an input and adjusting the study materials independent of the content of such an input.

For at least the above reasons, Applicants respectfully request that the 102(b) rejection of claim 43 be reconsidered and withdrawn.

#### **Claims 44-47 & 49-51**

**Claim 44** is patentable over Petrusinsky for at least the reason that Petrusinsky does not teach or suggest "waiting for the user to physically enter an input to the computer, with the input being in response to the study materials" and "upon failure to receive an input that the user physically enters into the computer within a specified amount of time, adjusting the study materials for presentation on the subject to get the user's attention so as to improve the user's concentration in learning the subject".

First of all, Petrusinsky teaches attaching a sensor unit 25 to a reference student's body to monitor the student's bioprocesses.<sup>7</sup> There is no teaching or suggestion in Petrusinsky to wait "for the user to physically enter an input to the computer", and then performing certain actions in view of lacking such input. Rather, Petrusinsky monitors the student's bioprocesses that are obtained via the sensor unit 25 attached to the student's body.<sup>8</sup>

Second, there is no teaching or suggestion that Petrusinsky adjusts study materials "upon failure to receive an input that the user physically enters into the computer within a specified amount of time".

Finally, the Office Action relied on column 18, lines 36-54 as support for rejecting Applicants' claim 44. In that section, Petrusinsky mentions observing a "prolonged reaction to the test signals". However, such test signals are different from "study information". In Petrusinsky, the "reproduction of the study information is periodically interrupted by test signals" so as to record the student's bioprocesses to such test signals. Based on certain characteristics in the bioprocesses, Petrusinsky would perform certain actions. After such actions, "study information unit 1 continues to reproduce the study information."<sup>9</sup>

In column 18, lines 36-54, Petrusinsky is not trying to record an input that the user physically enters into a computer, where the input being in response to study materials. As described above, Petrusinsky is recording the student's bioprocesses to "test signals", not "study information". If there is prolonged reaction to the test signals, Petrusinsky is not adjusting the study information. Instead, Petrusinsky would perform certain actions before reproducing "the study information". This is quite different from what is being claimed.

Guisinger does not teach or suggest the above mentioned deficiencies of Petrusinsky.

For at least the above reasons, Applicants respectfully request that the 103(a) rejection of claim 44 be reconsidered and withdrawn.

**Claim 45-47 & 49-51** depend from and add additional features to claim 44. Applicants believe that these claims are patentable for at least the reasons discussed above with regards to

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<sup>7</sup> See, for example, Petrusinsky, column 17, lines 26-37.

<sup>8</sup> See, for example, Petrusinsky, column 17, lines 26-37.

<sup>9</sup> See Petrusinsky column 18, lines 52-53.

claim 44, as well as for the features that they add. Some of these added features are discussed below.

Dependent **claim 45** states that “adjusting the study materials comprises presenting a question upon failure to receive an input that the user physically enters into the computer within the specified amount of time.” In rejecting claim 45, the Office Action directed Applicants’ attention to column 15, lines 28-33 of Petrusinsky as support for study information including questions. While Petrusinsky mentions the use of questions, the questions are presented as a part of Petrusinsky’s study information. Petrusinsky does not teach or suggest any decision process regarding whether the questions would be presented. Particularly, Petrusinsky does not teach or suggest that the question is presented “upon failure to receive an input that the user physically enters into the computer within the specified amount of time”. For at least the above reasons, Applicants respectfully request that the 102(b) rejection of claim 45 be reconsidered and withdrawn.

Dependent **claim 46** states that the presented question is unrelated to the subject of the study materials, and dependent **claim 47** states that the user’s reply to the question is not used to assess the user’s understanding in the subject. In rejecting claims 46-47, the Office Action directed Applicants’ attention to column 6, lines 7-12 of Lee. This portion of Lee merely states that a student has the “ability to stop and restart the presentation so that the student can take a break or ask the teacher a question”. Lee does not teach or suggest that its system asks the student a question, such as whether the student wants to take a break. Rather, Lee essentially says a user can press a pause button to take a break. Further, with Lee’s system not asking the student such a question, Lee’s system could not possibly have taught or suggested the conditions under which its system would ask such a question. Particularly, Lee does not teach or suggest that its system would ask such a question “upon failure to receive an input that the user physically enters into the computer within the specified amount of time.” For at least the above reasons, Applicants respectfully request that the 103 rejection of claims 46-47 be reconsidered and withdrawn.

Dependent **claim 49** states that “adjusting the study materials comprises changing a pace of the presentation of the study materials upon failure to receive an input that the user physically enters into the computer within the specified amount of time.” In rejecting claim 49, the Office Action directed Applicants’ attention to column 3, lines 6-9 of Petrusinsky, which says that

audiovisual signals can be delayed in time. However, while Petrusinsky mentions delaying audiovisual signals, Petrusinsky does not teach or suggest that the delay occurs “upon failure to receive an input that the user physically enters into the computer within the specified amount of time”. For at least the above reasons, Applicants respectfully request that the 102(b) rejection of claim 49 be reconsidered and withdrawn.

Dependent **claim 50** states that “adjusting the study materials comprises increasing a stimulation level of the study materials upon failure to receive an input that the user physically enters into the computer within the specified amount of time.” In rejecting claim 50, the Office Action directed Applicants’ attention to column 3, lines 14-18 of Petrusinsky, which mentions stimulation signals. While Petrusinsky mentions stimulation signals, Petrusinsky does not teach or suggest that the stimulation level of its study information is increased “upon failure to receive an input that the user physically enters into the computer within the specified amount of time”. For at least the above reasons, Applicants respectfully request that the 102(b) rejection of claim 50 be reconsidered and withdrawn.

Dependent **claim 51** states that “adjusting the study materials comprises switching to a different set of study materials upon failure to receive an input that the user physically enters into the computer within the specified amount of time.” In rejecting claim 51, the Office Action directed Applicants’ attention to column 18, lines 36-53 of Petrusinsky, which says that, under certain conditions, Petrusinsky can perform the action of presenting an additional program of suggestive and subsensor control and reinforcement, before reproducing the study information. In that section, Petrusinsky performs the action of presenting an additional program, which, in Petrusinsky, is not study information. Only after presenting the additional program, Petrusinsky “continues to reproduce the study information.”<sup>10</sup> These actions are different from the claimed action of “switching to a different set of study materials”. For at least the above reasons, Applicants respectfully request that the 102(b) rejection of claim 51 be reconsidered and withdrawn.

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<sup>10</sup> See Petrusinsky column 18, lines 49-53.

### **Claims 56-57**

**Claim 56** is patentable over Petrusinsky for at least the reason that Petrusinsky does not teach or suggest waiting for a user input to a computer in response to study materials, where the amount of time waited before adjusting the study materials depends on a level of difficulty of the study materials. First of all, Petrusinsky does not mention any difficulty level associated with its study information. Thus, Petrusinsky could not possibly have taught or suggested identifying an amount of time with no user input, where the amount of time depends on a level of difficulty. For at least the above reasons, Applicants respectfully request that the 102(b) rejection of claim 56 be reconsidered and withdrawn.

**Claim 57** depends from and adds additional features to claim 56. Applicants believe that claim 57 is patentable for at least the reasons discussed above with regards to claim 56, as well as for the features that it adds. More specifically, claim 57 states that the amount of time waited before study materials are adjusted also “depends on a reference response time of the user, and wherein the reference response time is determined based on a previous session where study materials on a subject were presented to the user via a computer.” For similar reasons to those discussed above with reference to claim 40, Applicants believe that Petrusinsky does not teach or suggest the features added by claim 57. Thus, Applicants respectfully request that the 102(b) rejection of claim 57 be reconsidered and withdrawn.

### **Claims 59-63**

**Claim 59** is patentable over Petrusinsky for at least the reason that Petrusinsky does not teach or suggest a computer-implemented method that includes “monitoring a timing regarding an input by the user to the computer via a keyboard or position-pointing device, with the input being in response to the study materials”, and “when a user input via the keyboard or position-pointing device in response to the study materials is not received within a specified time period, then adjusting the study materials for presentation on the subject to get the user’s attention so as to improve the user’s concentration in learning the subject”.

More specifically, as discussed above with regards to claim 39, Petrusinsky teaches attaching a sensor unit 25 to a reference student’s body<sup>11</sup> to monitor the student’s bioprocesses.<sup>12</sup>

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<sup>11</sup> See, for example, Petrusinsky, column 7, lines 45-47.

<sup>12</sup> See, for example, Petrusinsky, column 17, lines 26-37.



There is no mention of a keyboard or a position-pointing device (e.g., a mouse) in Petrusinsky, let alone “monitoring a timing regarding an input by the user to the computer via a keyboard or position-pointing device”, and then performing certain actions in view of lacking such input.

Second, there is no teaching or suggestion that Petrusinsky adjusts study material “when a user input via the keyboard or position-pointing device in response to the study materials is not received within a specified time period”. Though Petrusinsky seems to keep track of how many student bioprocesses occur over a period of time, and then makes some decisions based thereon<sup>13</sup>, this is different from performing an action when a user input is not received within a specified time period. Further, Petrusinsky monitors bioprocesses, not inputs via a keyboard or position-pointing device.

As mentioned above, Petrusinsky does mention that it can monitor a student’s time of reaction to test signals<sup>14</sup>. However, Petrusinsky’s “time of reaction” measurements are not used to determine when the system should adjust study materials if the user has not entered an input via a keyboard or a position-pointing device for a period of time. Rather, it appears that Petrusinsky monitors “time of reaction” so as to commutate in time (which Applicants interpret to mean reversing the direction of) specific signals<sup>15</sup>. This is quite different from what is being claimed.

For at least the above reasons, Applicants respectfully request that the 102(b) rejection of claim 59 be reconsidered and withdrawn.

**Claim 60-63** depend from and add additional features to claim 59. Applicants believe that these claims are patentable for at least the reasons discussed above with regards to claim 59, as well as for the features that they add. Some of the features added by the dependent claims are discussed below.

Dependent **claim 60** states that “adjusting the study materials comprises adjusting the study materials independent of the content of the input.” For reasons similar to those discussed above regarding claim 43, Applicants respectfully request that the 102(b) rejection of claim 60 be reconsidered and withdrawn.

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<sup>13</sup> See Petrusinsky, column 18, lines 36-53.

<sup>14</sup> See Petrusinsky, column 3, 14-18; and column 17, lines 1-10.

<sup>15</sup> See Petrusinsky, column 3, lines 14-18; and column 25, lines 64-68.

Dependent **claim 61** states that “adjusting the study materials comprises presenting a question”. For reasons similar to those discussed above regarding claim 45, Applicants respectfully request that the 102(b) rejection of claim 61 be reconsidered and withdrawn.

Dependent **claim 62** states that “adjusting the study materials comprises changing a pace of the presentation of the materials”. For reasons similar to those discussed above regarding claim 49, Applicants respectfully request that the 102(b) rejection of claim 62 be reconsidered and withdrawn.

Dependent **claim 63** states that “adjusting the study materials comprises switching to a different set of materials”. For reasons similar to those discussed above regarding claim 51, Applicants respectfully request that the 102(b) rejection of claim 63 be reconsidered and withdrawn.

**Claims 64-70**


Applicants respectfully request that new claims 64-70 be examined and allowed.

**V. Conclusion**

In light of the above, it is respectfully requested that all outstanding rejections and objections be reconsidered and withdrawn. The Examiner is respectfully requested to telephone the undersigned if he can assist in any way in expediting issuance of a patent.

The Commissioner is authorized to charge any underpayment or credit any overpayment to Deposit Account No. 50-0727 for any matter in connection with this response which may be required.

Respectfully submitted,

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